

**IN THE CLAIMS:**

All claims currently pending and under construction in the referenced application are shown below. Claims 7, 19, 20, 22, 24, 29, 34 and 36 are amended herein. New claims 37-40 are added. This listing of claims will replace all prior versions and listings of claims in the application. Claims 1-6, 8, 9, 12-18 and 25 and 26 were previously cancelled. Applicants respectfully submit that no new matter has been added.

**Listing of Claims:**

1-6. (Cancelled).

7. (Currently amended) An immunogenic composition for allowing the marking of an exposure of a subject to wild-type *Salmonella*, said immunogenic composition comprising: an immunologically effective amount of ~~a live~~ live mutated ~~bacterium~~ bacteria and a pharmaceutically acceptable carrier; wherein, said live mutated ~~bacterium~~ is bacteria ~~are~~ *Salmonella enterica* that in ~~its~~ their wild-type form ~~carries~~ carried flagella having at least one antigenic determinant; and wherein after mutation, said live mutated ~~bacterium~~ is bacteria ~~are~~ not capable of inducing an immune response to the at least one antigenic determinant of flagellin so as to allow marking of an exposure of the subject to the wild-type *Salmonella* in the subject to which it is administered.

8-9. (Cancelled).

10. (Previously Presented) The immunogenic composition according to claim 7, further comprising: an adjuvant selected from the group consisting of Freund's Complete adjuvant, Freund's Incomplete adjuvant, vitamin E, non-ionic block polymers, muramyl dipeptides, immune stimulating complexes, saponins, mineral oil, vegetable oil, Carbopol, *E. coli* heat-labile toxin, *Cholera* toxin, aluminum hydroxide, aluminum phosphate, aluminum oxide, oil-emulsions, and vitamin-E solubilisate.

11. (Previously Presented) The immunogenic composition according to claim 7, wherein the immunogenic composition is in a freeze-dried or spray-dried form.

12-18. (Cancelled).

19. (Currently amended) An immunogenic composition for allowing the marking of an exposure of a subject to wild-type *Salmonella*, said immunogenic composition comprising: an immunologically effective amount ~~of an of~~ inactivated mutated ~~bacterium~~ bacteria, the inactivated mutated bacteria having a mutation in a gene encoding flagellin, and a pharmaceutically acceptable carrier; wherein said inactivated mutated ~~bacterium is~~ bacteria are *Salmonella enterica* that in ~~its~~ their wild-type form ~~carries~~ carried flagella having at least one antigenic determinant; and wherein said inactivated mutated ~~bacterium is~~ bacteria are not capable of inducing an immune response to the at least one antigenic determinant of flagellin in ~~the a~~ a subject to which it is administered.

20. (Currently amended) A composition comprising:  
an immunologically effective amount ~~of a~~ of live mutated *Salmonella typhimurium*, wherein the wild-type form of the live mutated *S. typhimurium* ~~carries~~ carried flagella having at least one antigenic determinant;  
wherein said live mutated *S. typhimurium* ~~is~~ are not capable of inducing an immune response to the at least one antigenic determinant of flagellin in a subject to which it is administered;  
and  
a pharmaceutically acceptable carrier comprising water, a solution of physiological salt concentration, SPGA, sorbitol, mannitol, starch, sucrose, ~~glucose~~, dextran, albumin, casein, bovine serum, skim milk, or phosphate buffer.

21. (Previously Presented) A composition comprising:  
an immunologically effective amount ~~of a~~ of mutated *Salmonella typhimurium*, wherein the wild type form of the mutated *S. typhimurium* carries flagella;  
wherein said mutated *S. typhimurium* ~~is lacking~~ lack flagellin and ~~comprises~~ comprise an immunologically effective amount of a *S. typhimurium* strain STMP mutated bacterium;  
and  
a pharmaceutically acceptable carrier.

22. (Currently amended) An improved *Salmonella* vaccine, having an immunologically effective amount ~~of a~~ of *Salmonella enterica* ~~bacterium~~ bacteria and an adjuvant in a pharmaceutically acceptable carrier, the improvement comprising:  
the *Salmonella enterica* ~~bacterium~~ bacteria comprising an inactivated mutated bacterium that in ~~its~~ their wild type form ~~carries~~ carried flagella having at least one antigenic determinant, but in ~~its~~ their mutated form is no longer capable of inducing an immune response to the at least one antigenic determinant of flagellin in a subject to which ~~it~~ the vaccine is administered, the mutated form having a mutation in a gene encoding flagellin.

23. (Cancelled).

24. (Currently amended) The improved *Salmonella* vaccine of claim 22, wherein the inactivated mutated ~~bacterium~~bacteria lacks flagellin.

25-27. (Cancelled).

28. (Previously Presented) The improved *Salmonella* vaccine of claim 22, wherein the improved *Salmonella* vaccine is in a freeze-dried or spray-dried form.

29. (Currently amended) ~~An improvement in a~~A marker vaccine, ~~comprising a comprising~~ *Salmonella enterica*~~bacterium~~bacteria, the ~~improvement~~marker vaccine comprising:

an immunologically effective amount ~~of a~~of mutated *Salmonella enterica*, wherein the wild type form of the mutated *Salmonella enterica* ~~carries~~carried flagella having at least one antigenic determinant;

wherein said mutated *Salmonella enterica* ~~bacterium~~is bacteria have a mutation in a gene encoding flagellin and are not capable of inducing an immune response to the at least one antigenic determinant of flagellin in a subject to which it is administered;

an adjuvant;

a pharmaceutically acceptable carrier; and

wherein the marker vaccine is in a freeze-dried or spray-dried form.

30. (Previously Presented) The immunogenic composition according to claim 19, wherein the immunogenic composition is in a freeze-dried or spray-dried form.

31. (Previously Presented) The improved marker vaccine of claim 29, wherein the mutated *Salmonella enterica* is in live attenuated form.

32. (Previously Presented) The improved marker vaccine of claim 29, wherein the mutated *Salmonella enterica* lacks flagellin.

33. (Cancelled).

34. (Currently amended) In an immunogenic composition including a *Salmonella* bacterium, the improvement comprising:  
a lyophilized immunogenic composition comprising a mutated *Salmonella enterica*;  
said *Salmonella enterica* in its wild type form carrying flagella having at least one antigenic determinant; and  
said mutated *Salmonella enterica* lacking at least one antigenic determinant of flagellin and not being capable of inducing an immune response to the at least one antigenic determinant of flagellin in a subject to which it is administered, the mutated *Salmonella enterica* having a mutation in a gene encoding flagellin.

35. (Cancelled).

36. (Currently amended) A composition comprising:  
an immunologically effective amount ~~of a~~ of mutated *S. typhimurium*, wherein the wild type form of the mutated *S. typhimurium* carries flagella;  
wherein said mutated *S. typhimurium* comprises an immunologically effective amount ~~of a~~ of *S. typhimurium* strain STMP mutated ~~bacterium~~ bacteria; and  
a pharmaceutically acceptable carrier.

37. (New) An immunogenic composition for allowing the marking of an exposure of a subject to wild-type *Salmonella*, said immunogenic composition consisting essentially of:  
an immunologically effective amount of live mutated bacteria and water;  
an adjuvant;  
wherein, said live mutated bacteria are *Salmonella enterica* that in their wild-type form carried flagella having at least one antigenic determinant; and  
wherein after mutation said live mutated bacteria are not capable of inducing an immune response to the at least one antigenic determinant of flagellin so as to allow marking of an exposure of the subject to the wild-type *Salmonella* in the subject to which the vaccine is

administered.

38. (New) An immunogenic composition for allowing the marking of an exposure of a subject to wild-type *Salmonella*, said immunogenic composition consisting essentially of:  
an immunologically effective amount of live mutated bacteria and water;  
wherein, said live mutated bacteria are *Salmonella enterica* that in their wild-type form carried flagella having at least one antigenic determinant; and  
wherein after mutation said live mutated bacteria are not capable of inducing an immune response to the at least one antigenic determinant of flagellin so as to allow marking of an exposure of the subject to the wild-type *Salmonella* in the subject to which the immunogenic composition is administered.

39. (New) An immunogenic composition for allowing the marking of an exposure of a subject to wild-type *Salmonella*, said immunogenic composition comprising:  
an immunologically effective amount of live mutated bacteria and a pharmaceutically acceptable carrier;  
an adjuvant;  
wherein, said live mutated bacteria are *Salmonella enterica* that in their wild-type form carried flagella having at least one antigenic determinant; and  
wherein after mutation said live mutated bacteria are not capable of inducing an immune response to the at least one antigenic determinant of flagellin so as to allow marking of an exposure of the subject to the wild-type *Salmonella* in the subject to which the immunogenic composition is administered.

40. (New) A composition consisting essentially of:  
an immunologically effective amount of live mutated *Salmonella typhimurium*, wherein the wild-type form of the live mutated *S. typhimurium* carried flagella having at least one antigenic determinant;  
wherein said live mutated *S. typhimurium* are not capable of inducing an immune response to the at least one antigenic determinant of flagellin in a subject to which the immunogenic

composition is administered; and  
a pharmaceutically acceptable carrier comprising water, a solution of physiological salt concentration, SPGA, sorbitol, mannitol, starch, sucrose, dextran, albumin, casein, bovine serum, skim milk, or phosphate buffer.